APPENDIX A

Illustrative examples of issued U.S. Patents with claims to antibody molecules with ***identifying characteristics.***

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United States Patent

Patent Number: US 5496705
Date of Patent: 960305

MONOCLONAL ANTIBODY SPECIFIC FOR RAT SYNAPTOPHYSIN

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Appl. No.: US 224195
Filed: 940407

Related U.S. Application Data

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Priority Applic(Ser#,Date): JP 91229756 910816

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U.S. Cl. 435007230; 435007100; 435007210; 435960000; 436548000; 530388200; 530388800; 530388850
Field of Search 435007100; 435007210; 435007230; 435007900; 435007920; 435007950; 435070210; 435240270; 435960000; 436513000; 436548000; 436813000; 530388200; 530388800; 530388850; 530389700

Primary Examiner - Scheiner, Toni R
Assistant Examiner - Green, Lora M
Attorney, Agent or Firm - Oblon, Spivak, McClelland, Maier & Neustadt

ABSTRACT

An object of this invention is to provide a monoclonal antibody which can quantitatively analyze a very small amount of synaptophysin present in tissues using a small amount of the antibody in accordance with a complement fixation test. Disclosed is a monoclonal antibody produced by using a rat brain extract as an immunogen, wherein an immunoglobulin class thereof is IgM, and the monoclonal antibody has specific reactivity for rat synaptophysin or P-38.
008 Claims, 3 Drawing Figures, 3 Drawing Sheets

EXEMPLARY CLAIM

1. A method of detecting a neuroendocrine tumor, comprising: contacting (a) a labeled monoclonal antibody produced by the hybridoma RB2-4, deposited with the Fermentation Research Institute and assigned the Deposit No. FERM BP-3944, said monoclonal antibody being of the immunoglobulin class M and specifically binding rat synaptophysin, or (b) a labeled monoclonal antibody having the identifying characteristics of the monoclonal antibody produced by said hybridoma, with an organ, a tissue slice or a tissue homogenate which may contain synaptophysin, to bind said labelled monoclonal antibody to synaptophysin; and correlating the presence or concentration of said monoclonal antibody bound to said synaptophysin to an indication of a neuroendocrine tumor.

NON-EXEMPLARY CLAIMS

2. The method of claim 1, wherein said neuroendocrine tumor is metastasized, said organ or tissue has no synaptic vesicles, and detecting said monoclonal antibody bound to said synaptophysin is an indication of said metastasized neuroendocrine tumor.
3. The method of claim 1, wherein said labeled monoclonal antibody is labeled with a radioisotope.
4. The method of claim 1, wherein said labeled monoclonal antibody is labeled with a fluorescent marker.
5. A method of effecting or quantitatively analyzing rat synaptophysin, comprising: performing an immunoassay by contacting a rat tissue homogenate with (a) a monoclonal antibody produced by the hybridoma RB2-4, deposited with the Fermentation Research Institute and assigned the Deposit No. FERM BP-3944, said monoclonal antibody being of the

immunoglobulin class M and specifically binding rat synaptophysin, or (b) a monoclonal antibody having the identifying characteristics of the monoclonal antibody produced by said hybridoma, and detecting said monoclonal antibody specifically bound to said rat tissue homogenate to obtain a result of said immunoassay; and correlating said result of said immunoassay to the presence or quantity of said rat synaptophysin.

6. The method of claim 5, wherein said immunoassay is a complement fixation test.
7. The method of claim 5, wherein said monoclonal antibody is labeled with a radioisotope.
8. The method of claim 5, wherein said monoclonal antibody is labeled with a fluorescent marker

United States Patent

Patent Number: US 5352584
Date of Patent: 941004

MONOCLONAL ANTIBODIES WHICH BIND (E)-5-(2-BROMOVINYL)-ARABINOFURANOSYLURACIL AND DIAGNOSTIC METHODS BASED THEREON; RADIOIMMUNOASSAY OR ENZYME-LINKED IMMUNOSORBENT ASSAY FOR QUNATITATIVE ANALYSIS

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Appl. No.: US 468303
Filed: 900122

Related U.S. Application Data

Priority Applic(Ser#,Date): US 468303 900122
Int. Cl. G01N-033/536; C07K-015/28; C12N-005/20; G01N-033/543
U.S. Cl. 435007940; 435240270; 436545000; 436548000; 436804000; 530388900; 530391300; 935100000; 935102000; 935103000; 935104000; 935110000
Field of Search 435007940; 435172200; 435188000; 435240270; 436545000; 436548000; 436804000; 530387000; 530388900; 530391300; 530402000; 530403000; 935100000; 935102000; 935103000; 935104000; 935110000

Primary Examiner - Ceperley, Mary E
Attorney, Agent or Firm - Gaul, Timothy J

ABSTRACT

Monoclonal antibodies which bind (E)-5-(2-bromovinyl)arabinofuranosyluracil and/or immunologically related compounds, hybrid cell lines which produce these monoclonal antibodies, and immunoassay methods for detecting (E)-5-(2-bromovinyl)arabinofuranosyluracil and/or immunologically related compounds using these monoclonal antibodies.
030 Claims, 5 Drawing Figures, 4 Drawing Sheets

EXEMPLARY CLAIM

1. A hybrid cell line that produces a monoclonal antibody which binds one or more compounds of the formula:

1-R2,2,4-DI(O=),5-(R1-CH=CH-)-1,2,3,4-TETRAHYDRO-PYRIMIDINE

wherein R1 is

I(125)-CH=CH-, Br-CH=CH-, HOOC-CH=CH-, (4-(I(125)-)IMIDZAOL-5-YL)-CH2-CH2-NH-CO-, or Thyroglobulin-NH-CO-,

and R2 is

3,4-DI(HO-),5-(HO-CH2-)TETRAHYDROFUR-2-YL-;

or wherein R1 is

Br-CH=CH-

and R2 is H; or wherein R1 is

Br-CH=CH-

and R2 is

3-(HO-),4-R3,5-(HO-CH2-)TETRAHYDROFUR-2-YL-;

and R3 is -NH-Thyroglobulin or

(4-(I(125)-)IMIDZAOL-5-YL)-CH2-CH2-NH-.

23. An enzyme immunoassay for determining the amount of a compound as defined in claim 1 in a sample comprising: (a) incubating the sample with a monoclonal antibody which binds the compound and the compound conjugated to a carrier and immobilized on a solid support; (b) separating any unbound substances from the solid support; (c) contacting the solid support with an enzyme-labelled antibody which is capable of binding with the monoclonal antibody which binds the compound; (d) separating any unbound enzyme-labelled antibody from the solid support; (e) contacting and incubating the solid support with an enzyme substrate capable of reacting with the enzyme of the enzymelabelled antibody to produce a detectable reaction product; (f) measuring the amount of detectable reaction product formed; and (g) correlating the amount of detectable reaction product formed with the amount of the compound in the sample.

NON-EXEMPLARY CLAIMS

2. The hybrid cell line according to claim 1 wherein the compound is CV-araU.
3. The hybrid cell line according to claim 1 wherein the compound is bromovinyluracil.
4. The hybrid cell line according to claim 1 having the identifying characteristics of a cell line designated HYBV-47.
5. The monoclonal antibody secreted by the hybrid cell line according to claims 2, 3 or 4.
6. The monoclonal antibody secreted by the hybrid cell line according to claim 1.
7. The monoclonal antibody according to claim 6 selected from the group consisting of IgG or IgM.
8. The monoclonal antibody according to claim 6 which is a murine monoclonal antibody.
9. The monoclonal antibody according to claim 6 having the identifying characteristics of a monoclonal antibody designated MCBV-47.
10. The monoclonal antibody according to claims 6 or 9 which has been derivatized.
11. The monoclonal antibody according to claim 10 which has been labelled with a radioisotope.
12. The monoclonal antibody according to claim 11 wherein the radioisotope is selected from the group consisting of 125I or 131I.
13. The monoclonal antibody according to claim 10 which has been conjugated to an enzyme.
14. The monoclonal antibody according to claims 6 or 9 which has been substantially purified.
15. An immunoassay method for detecting the presence of a compound as defined in claim 1 in a sample comprising: (a) incubating the sample with a monoclonal antibody which binds to the compound; and (b) detecting the presence of immune complexes formed by the compound and the monoclonal antibody.
16. An immunoassay method for quantitatively determining the amount of a compound as defined in claim 1 in a sample comprising: (a) incubating the sample with a monoclonal antibody which binds to the compound; (b) determining the amount of immune complexes formed by the compound and the monoclonal antibody; and (c) correlating the amount of immune complexes formed with the amount of the compound present in the sample.
17. The immunoassay method according to claims 15 or 16 which is a radioimmunoassay.
18. The immunoassay method according to claims 15 or 16 which is an enzyme immunoassay.
19. A radioimmunoassay for determining the amount of a compound as defined in claim 1 in a sample comprising: (a) incubating the sample with a radiolabelled derivative of the compound and a monoclonal antibody which binds the compound; (b) separating the antibody-bound radiolabelled derivative from the unbound radiolabelled derivative; (c) measuring the amount of antibody-bound radiolabelled derivative or unbound radiolabelled derivative; and (d) correlating the amount of antibody-bound radiolabelled derivative or unbound radiolabelled derivative with the amount of the compound in the sample.
20. The radioimmunoassay according to claim 19 wherein the antibody-bound

radiolabelled derivative is separated from the unbound radiolabelled derivative by precipitating the antibody bound radiolabelled derivative with polyethylene glycol.

21. The radioimmunoassay according to claim 19 wherein the monoclonal antibody is a murine monoclonal antibody.

22. The radioimmunoassay according to claim 19 wherein the radiolabelled derivative is labeled with 125I.

24. The enzyme immunoassay according to claim 23 wherein the carrier is thyroglobulin.

25. The enzyme immunoassay according to claim 23 wherein the monoclonal antibody is a murine monoclonal antibody.

26. The enzyme immunoassay according to claim 25 wherein the enzyme-labelled antibody is goat anti-mouse antibody conjugated to horseradish peroxidase.

27. The enzyme immunoassay according to claim 26 wherein the goat anti-mouse antibody is affinity purified.

28. The enzyme immunoassay according to claim 26 wherein the enzyme substrate is hydrogen peroxide and 2,2'-azino-bis(3-ethylbenzthiazoline-6-sulfonic acid).

29. The enzyme immunoassay according to claim 23 wherein the solid support is the inner wall or bottom of a polystyrene microtiter plate well.

30. A hybrid cell line that produces a monoclonal antibody that binds one or more compound selected from: (a) compounds of the formula

D R A W I N G

wherein R is -Br,

D R A W I N G

(b) compounds of the formula

D R A W I N G

wherein R is NH-thyroglobulin or

D R A W I N G

(c) bromovinyluracil, CV-araU, and uracil- Beta -D-arabinofuranoside

United States Patent

Patent Number: US 5332670
Date of Patent: 940726

MONOCLONAL ANTIBODY AGAINST HUMAN PLATELETS; WHICH BINDS ONLY AFTER ACTIVATION OF THE RESTING PLATELETS

Inventor(s): Gralnick, Harvey R, Kensington, MD, (US)
Assignee: The United States of America as represented by the Department of Health and Human Services, Washington, DC
Appl. No.: US 815882
Filed: 920107

Related U.S. Application Data

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Priority Applic(Ser#,Date): US 815882 920107
US 432380 891103

Int. Cl. C12N-005/12; C07K-015/28
U.S. Cl. 435240270; 530388250
Field of Search 435240270; 530388250

Primary Examiner - Lacey, David L
Assistant Examiner - Loring, Susan A
Attorney, Agent or Firm - Birch, Stewart, Kolasch & Birch

ABSTRACT

A novel anti-platelet monoclonal antibody which is without effect on inactivated platelets, but which augments platelet aggregation after minimal perturbation of the platelets, and various applications of the monoclonal antibody are described.
002 Claims, 17 Drawing Figures, 5 Drawing Sheets

EXEMPLARY CLAIM

1. A cell line consisting of cells which secrete an antibody having all of the identifying characteristics of the antibody secreted by the hybridoma deposited as HB 10273.

NON-EXEMPLARY CLAIMS

2. An antibody having all of the identifying characteristics of the antibody secreted by the hybridoma deposited as HB 10273.

United States Patent

Patent Number: US 5314996
Date of Patent: 940524

ISOLATED NUCLEOTIDE SEQUENCES ENCODING AN: ANTIGEN BINDING SITE OF MONOCLONAL ANTIBODY PD41; AND ANTIGEN ASSOCIATED WITH PROSTATE ADENOCARCINOMAS

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Assignee: Eastern Virginia Medical School of Medical College of Hampton Roads, Norfolk, VA
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Filed: 930713

Related U.S. Application Data

Division of(Pat#,Ser#,Date): US 5227471 US 828057 920130
Priority Applic(Ser#,Date): US 91628 930713
US 828057 920130

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U.S. Cl. 530387300; 435070210; 435172200; 435240270; 530350000; 530387100; 530388150; 530388220; 530388800; 530395000; 536023500; 536023530
Field of Search 435070210; 435172200; 435240270; 530350000; 530387100; 530387300; 530388150; 530388220; 530388800; 530395000; 536023500; 536023530

Primary Examiner - Lacey, David L
Assistant Examiner - Adams, Arnold E
Attorney, Agent or Firm - Pennie & Edmonds

ABSTRACT

Monoclonal antibodies that bind specifically to prostate carcinoma and do not bind substantially to normal prostate or benign prostatic hyperplasia, as well as hybridoma cell lines producing the monoclonal antibodies are disclosed. In one embodiment, a monoclonal antibody designated MAb PD41 is disclosed. A new antigen designated prostate mucin antigen is disclosed in isolated, substantially pure form. In addition, methods for using the hybridoma cell lines, the monoclonal antibody and/or the antigen for diagnosis, prophylaxis and/or treatment of prostate carcinoma are disclosed.
004 Claims, 13 Drawing Figures, 9 Drawing Sheets

EXEMPLARY CLAIM

1. An isolated prostate antigen which is present in human prostate carcinoma, is not found substantially in human benign prostatic hyperplasia or normal human prostate and to which a monoclonal antibody having the identifying characteristics of the monoclonal produced by hybridoma cell line PD41 having ATCC Accession No. HB 11094 binds specifically.

NON-EXEMPLARY CLAIMS

2. An isolated nucleotide sequence encoding an antigen binding site of a monoclonal antibody, having the identifying characteristics of the monoclonal antibody produced by hybridoma cell line PD41 having ATCC Accession No. HB 11094, that binds selectively to prostate carcinoma and does not substantially bind to normal prostate tissue or to benign prostatic hyperplasia.
3. An isolated nucleotide sequence encoding an antigen binding site which comprises the antigen binding site of a monoclonal antibody that binds selectively to a prostate mucin antigen that is expressed in human prostatic carcinoma but is not expressed substantially in human benign prostatic hyperplasia or normal human prostatic tissues, said prostate mucin antigen being recognized by a monoclonal antibody having the identifying characteristics of the monoclonal antibody

produced by hybridoma cell line PD41 having ATCC Accession No. HB 11094.

4. An isolated nucleotide sequence encoding the prostate antigen according to claim 1

United States Patent

Patent Number: US 5229289
Date of Patent: 930720

MONOCLONAL ANTIBODIES AND VACCINE DEVELOPMENT DIRECTED TO HUMAN CANCER-ASSOCIATED ANTIGENS BY IMMUNIZATION WITH ANIMAL AND HUMAN AND WITH SYNTHETIC CARBOHYDRATE-CARRIER CONJUGATES; ANTICARCINOGENIC AGENTS

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Assignee: The Biomembrane Institute, Seattle, WA
Appl. No.: US 807817
Filed: 911216

Related U.S. Application Data

Continuation of(Pat#,Ser#,Date):	US 317492	890301
Cont-in-part of(Pat#,Ser#,Date):ABANDONED	US 167786	880311
Priority Applic(Ser#,Date): US 807817	911216	
US 317492	890301	
US 167786	880311	

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U.S. Cl. 435240270; 530387500; 530388850; 530808000
Field of Search 424085800; 435240270; 530387000; 530388000; 530395000; 530808000; 530809000

Primary Examiner - Nucker, Christine M
Assistant Examiner - Cunningham, T M
Attorney, Agent or Firm - Sughrue, Mion, Zinn, Macpeak & Seas

ABSTRACT

A method of producing monoclonal antibodies that bind to human cancer-associated mucin-type glycoprotein antigens comprising: (1) immunizing a host with a core structure of a mucin-type glycoprotein: (2) fusing splenocytes from said immunized host with myeloma cells to form hybridoma cells; (3) culturing said hybridoma cells on selective medium; (4) selecting hybridoma cells surviving step (3) that secrete antibody that binds to said core structure of a mucin-type glycoprotein; (5) cloning said selected hybridoma cells from step (4); (6) culturing said cloned hybridoma cells; and (7) recovering said antibody. Hybridomas and monoclonal antibodies produced by the above-described method. Methods of passive and active immunization employing the monoclonal antibodies and mucin-type glycoproteins or synthetic oligosaccharide-carrier conjugates.
004 Claims, 23 Drawing Figures, 10 Drawing Sheets

EXEMPLARY CLAIM

1. A hybridoma that secretes a monoclonal antibody, wherein said monoclonal antibody has all the identifying characteristics of BM-4 secreted by hybridoma BM-4 (ATCC Deposit No. HB-9654).

NON-EXEMPLARY CLAIMS

2. The hybridoma claimed in claim 1, wherein said monoclonal antibody is BM-4 secreted by hybridoma BM-4 (ATCC Deposit No. HB-9654).
3. A monoclonal antibody, wherein said monoclonal antibody has all the identifying characteristics of monoclonal antibody BM-4 secreted by hybridoma BM-4 (ATCC Deposit No. HB-9654).
4. The monoclonal antibody claimed in claim 3, wherein said monoclonal antibody is BM-4 secreted by hybridoma BM-4 (ATCC Deposit No. HB-9654

United States Patent

Patent Number: US 5223426
Date of Patent: 930629

MONOCLONAL ANTIBODIES REACTIVE WITH DEFINED REGIONS OF THE T-CELL ANTIGEN RECEPTOR; USED IN DIAGNOSIS AND THERAPY OF RHEUMATOID ARTHRITIS

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Assignee: T Cell Sciences, Inc, Cambridge, MA
Appl. No.: US 449692
Filed: 891211

Related U.S. Application Data

Cont-in-part of(Pat#,Ser#,Date):ABANDONED US 284511 881215
US 343189 890425

Priority Applic(Ser#,Date): US 449692 891211
US 284511 881215
US 343189 890425

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U.S. Cl. 435240270; 424144100; 424154100; 530387100; 530387900; 530388220; 530388750
Field of Search 435240270; 530002000; 530381100; 530387000; 530395000

Primary Examiner - Nucker, Christine M
Assistant Examiner - Sidberry, Hazel F
Attorney, Agent or Firm - Pennie & Edmonds

ABSTRACT

The present invention relates to monoclonal antibodies which recognize defined regions of the T-cell receptor (TCR). In a specific embodiment, the invention provides monoclonal antibodies which are reactive with a constant region of the alpha chain of the TCR. In particular embodiments, the invention relates to two monoclonal antibodies, termed Alpha F1 and Alpha F2, which react with two different epitopes on the framework region of the Alpha monomer of the TCR molecule. In another specific embodiment, the invention is directed to monoclonal antibodies reactive with a variable region of the beta chain of the TCR. In particular, the invention provides two monoclonal antibodies, termed W112 and 2D1, which react with Beta chain variable regions V Beta 5.3 and V Beta 8.1, respectively. In another specific embodiment, the invention is directed to monoclonal antibodies reactive with a variable region of the delta chain of the TCR. In particular, the invention provides monoclonal antibody delta TCS1, isotype IgG2a. The monoclonal antibodies of the invention have value in diagnosis and therapy and are useful tools for study of the immune system.
013 Claims, 23 Drawing Figures, 24 Drawing Sheets

EXEMPLARY CLAIM

1. A monoclonal antibody or derivative or fragment thereof reactive with an epitope of the constant region of the alpha chain of a T cell antigen receptor, which monoclonal antibody or derivative or fragment thereof is not reactive with the beta chain of a T cell antigen receptor, and which monoclonal antibody or derivative or fragment thereof is blocked from binding to the Alpha , Beta T cell receptor by a peptide consisting of amino acids 141-159 of the alpha chain.

NON-EXEMPLARY CLAIMS

2. A monoclonal antibody or derivative or fragment thereof reactive with an epitope of the constant region of the alpha chain of a T cell antigen receptor, which monoclonal antibody or derivative or fragment thereof is not reactive with the beta chain of a T cell antigen receptor, and which monoclonal antibody or derivative or fragment thereof is blocked from

binding to the Alpha , Beta T cell receptor by a peptide consisting of amino acids 212-231 of the alpha chain.

3. The monoclonal antibody, or derivative, or fragment of claim 1 wherein the antibody has the identifying characteristics of monoclonal antibody Alpha F1, as produced by the hybridoma deposited with the ATCC and assigned accession number HB 9900.
4. Monoclonal antibody Alpha F1, as produced by the hybridoma deposited with the ATCC and assigned accession number HB 9900.
5. The monoclonal antibody, or derivative, or fragment of claim 2 wherein the antibody has the identifying characteristics of monoclonal antibody Alpha F2, as produced by the hybridoma deposited with the ATCC and assigned accession number HB 9901.
6. Monoclonal antibody Alpha F2, as produced by the hybridoma deposited with the ATCC and assigned accession number HB 9901.
7. The Fv, Fab, Fab', or F(ab')2 fragment of the monoclonal antibody of claim 1 or 2.
8. The Fv, Fab, Fab', or F(ab')2 fragment of the monoclonal antibody of claim 4 or 6.
9. An antibody comprising the Fv, Fab, Fab', or F(ab')2 fragment of the monoclonal antibody of claim 4.
10. An antibody comprising the Fv, Fab, Fab', or F(ab')2 fragment of the monoclonal antibody of claim 6.
11. A hybridoma cell line, deposited with the ATCC and assigned accession number HB 9900, which produces monoclonal antibody Alpha F1.
12. A hybridoma cell line deposited with the ATCC and assigned accession number HB 9901, which produces monoclonal antibody Alpha F2.
13. An antibody of any one of claims 1-6, 9 or 10 which is detectably labeled

United States Patent

Patent Number: US 5183756
Date of Patent: 930202

MONOCLONAL ANTIBODY (D612) HAVING SELECTIVE REACTIVITY FOR GASTROINTESTINAL CARICINOMAS AND METHOD FOR EMPLOYING THE SAME; PRODUCED BY A HYBRIDOMA ASSIGNED A.T.C.C.ACCESSION NO.HB 9796; WHICH DOES NOT BIND WITH OTHER CANCER OR NORMAL HUMAN TISSUE; USEFUL FOR DIAGNOSIS AND EVOLUTION OF DISEASE

Inventor(s): Schlom, Jeffrey, Potomac, MD, (US)
Assignee: The United States of America as represented by the Department of Health and Human Services, Washington, DC
Appl. No.: US 715748
Filed: 910618

Related U.S. Application Data

Continuation of(Pat#,Ser#,Date):ABANDONED US 234130 880819
Priority Applic(Ser#,Date): US 715748 910618
US 234130 880819

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U.S. Cl. 435240270; 424001490; 424155100; 424156100; 424178100; 424183100; 435070210; 435172200; 435188000; 530387200; 530388800; 530388850; 530391300; 530391700
Field of Search 424001100; 424085800; 424085910; 424088000; 424093000; 435070210; 435172200; 435240270; 530388200; 530388800; 530388850; 530391100; 530391700

Primary Examiner - Doll, John J
Assistant Examiner - Budens, Robert D
Attorney, Agent or Firm - Rucker, Susan S

ABSTRACT

The present invention relates to the monoclonal antibody (termed D612) having selective reactivity for gastrointestinal carcinoma and methods for employing the same. A hybridoma producing such antibodies has been prepared.
019 Claims, 4 Drawing Figures, 3 Drawing Sheets

EXEMPLARY CLAIM

1. A hybridoma assigned A.T.C.C. Accession No. HB 9796 which produces the monoclonal antibody designated D612 which immunologically binds to human gatrointestinal cancers and normal gastrointestinal epithelium, and not other cancers or other normal human tissues.

NON-EXEMPLARY CLAIMS

2. Monoclonal antibodies having all the identifying characteristics of the antibodies produced by the hybridoma cell line assigned A.T.C.C. Accession No. HB 9796, immunoreactive fragments, recombinants or chimerics thereof, which immunologically bind to human gastrointestinal cancers and normal gastrointestinal epithelium, and not other cancers or normal human tissues.
3. Monoclonal antibodies according to claim 2 having all the identifying characteristics of the antibodies produced by the hybridoma cell line assigned the A.T.C.C. Accession No. HB 9796, immunoreactive fragments or chimerics thereof, which immunologically bind to human gastrointestinal cancers and normal gastrointestinal epithelium, and not other cancers or normal human tissues.
4. Monoclonal antibodies according to claim 2 having all the identifying characteristics of the antibodies produced by the hybridoma cell line assigned the A.T.C.C. Accession No. HB 9796, immunoreactive fragments or recombinants thereof, which immunologically bind to human gastrointestinal cancers and normal gastrointestinal epithelium, and not other cancers or normal human tissues.

5. The monoclonal antibody of claim 2, which immunologically binds to a 48,000 molecular weight, glycoprotein found on the surface of colon cancer cells.
6. Monoclonal antibodies of claim 2, obtained from a hybridoma selected from the group consisting of hybridomas having all the identifying characteristics of A.T.C.C. No. HB 9796.
7. Monoclonal antibodies of claim 2, wherein said antibodies are of an IgG2a isotype.
8. Monoclonal antibodies of claim 2, wherein said antibodies are conjugated to a label, a tumor detecting marker or to a therapeutic agent.
9. Monoclonal antibodies of claim 8, wherein said label is selected from the group consisting of a radioisotope, a fluorescent molecule and an enzyme.
10. Monoclonal antibodies of claim 9, wherein said radioisotope is selected from the group consisting of ^{32}P, ^{14}C, ^{3}H, ^{125}I and ^{35}S.
11. Monoclonal antibodies of claim 9, wherein said fluorescent molecule is selected from the group consisting of fluorescein and rhodamine.
12. Monoclonal antibodies of claim 9, wherein said enzyme is selected from the group consisting of alkaline phosphatase and horseradish peroxidase.
13. Monoclonal antibodies of claim 8, wherein said tumor detecting marker is selected from the group consisting of ^{125}I, ^{131}I, ^{123}I, ^{111}In, ^{67}Ga, ^{68}Ga, ^{99m}Tc and Gd.
14. Monoclonal antibodies of claim 8, wherein said therapeutic agent is selected from the group consisting of a radionuclide, drug, toxin and second antibody.
15. Monoclonal antibodies of claim 14, wherein said radionuclide is selected from the group consisting of ^{131}I, ^{90}Y, ^{105}Rh, ^{47}Sc, ^{67}Cu, ^{212}Bi and ^{211}At.
16. Monoclonal antibodies of claim 14, wherein said drug is selected from the group consisting of methotrexate and adriamycin.
17. A composition of matter comprising antibodies of claim 2, in a carrier.
18. A composition of matter comprising antibodies of claim 2, attached to a solid support.
19. A method of producing anti-idiotype antibodies by administration of an immunogenic effective amount of the composition of claim 17, to a mammal and recovering said anti-idiotype antibodies

United States Patent

Patent Number: US 5153118
Date of Patent: 921006

MONOCLONAL ANTIBODIES HAVING BINDING SPECIFICITY TO HUMAN PROSTATE TUMOR-ASSOCIATED ANTIGENS AND METHODS FOR EMPLOYING THE SAME; MEDICAL DIAGNOSIS FOR PROSTATE TUMORS; PREFERENTIAL

Inventor(s): Starling, James J, Carmel, IN, (US); Wright, Jr, George L, Virginia Beach, VA, (US)
Assignee: Eastern Virginia Medical Authority, Norfolk, VA
Appl. No.: US 262123
Filed: 881025

Related U.S. Application Data

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Cont-in-part of(Pat#,Ser#,Date):ABANDONED	US 809719	851217
Priority Applic(Ser#,Date):	US 262123	881025
	US 941911	861215
	US 809719	851217

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Field of Search 424001100; 424009000; 424085800; 424085910; 435007000; 435007230; 435007900; 435172200; 435240270; 435948000; 436548000; 436813000; 530387000; 530391000; 530809000; 935107000; 935110000

, 1985, pp. 309-324.
Primary Examiner - Saunders, David
Attorney, Agent or Firm - Sughrue, Mion, Zinn, Macpeak & Seas

ABSTRACT

Monoclonal antibodies having binding specificity to human prostate tumor-associated antigens but not to prostate-specific antigen (PSA) or prostatic acid phosphatase (PAP); and methods of diagnosis and treatment employing the same.
012 Claims, 6 Drawing Figures, 2 Drawing Sheets

EXEMPLARY CLAIM

1. A monoclonal antibody having binding specificity to human prostate tumor-associated membrane antigens that; (a) does not having binding specificity to prostate-specific antigen, prostatic acid phosphatase, normal lung, lung carcinoma, bladder carcinoma, normal breast, normal liver, breast carcinoma or normal spleen; and (b) does not have binding specificity to both DU145 and PCP-3.

NON-EXEMPLARY CLAIMS

2. The monoclonal antibody as claimed in claim 1, wherein said monoclonal, antibody is TURP-27 having the identifying characteristics of the antibody secreted by hybridoma ATCC No. HB 8977.
3. A method for diagnosing prostate tumors and metastases thereof comprising: (a) obtaining a sample of body fluid from a patient; (b) exposing the body fluid to a monoclonal antibody as claimed in claim 1 wherein said antibody is secreted by hybridoma TURP-27 with ATCC No. HB 8977; (c) determining the amount of monoclonal antibody binding to substances present in the body fluid; and (d) comparing the amount of monoclonal antibody bound to body fluid substances to a predetermined base level to ascertain the presence of prostate tumors or metastases thereof.
4. The method as claimed in claim 3, wherein said body fluid is one member selected from the group consisting of blood, serum, seminal plasma, semen, urine and prostatic fluid.

5. The method as claimed in claim 3, wherein the amount of monoclonal antibody binding to substances present in the body fluid is determined by means of a radioimmunoassay.
6. The method as claimed in claim 3, wherein the amount of monoclonal antibody binding to substances present in the body fluid is determined by means of an enzyme immunoassay.
7. A method for diagnosing the presence of prostate tumors or metastases thereof comprising: (a) administering to a patient, a monoclonal antibody as claimed in claim 1 wherein said antibody is secreted hybridoma TURP-27 with ATCC No. HB 8977 wherein said monoclonal antibody is conjugated to a marker; and (b) exposing the patient to a detection device to identify areas of marker corresponding to prostate tumor sites or metastatic sites thereof.
8. The method as claimed in claim 7, wherein the marker is a nuclear magnetic spin-resonance isotope and wherein the detection device is a nuclear magnetic imaging device.
9. The method as claimed in claim 8, wherein the marker is gadolinium.
10. The method as claimed in claim 7, wherein the marker is a radioactive substance and wherein the detection device is a gamma scintillation camera.
11. The method as claimed in claim 10, wherein the radioactive substance is one member selected from the group consisting of I125, I131, I123, In111,m In113, Ga67, Ga68, Ru97, R103, Hg197, Hg203 and Tc99m.
12. The method as claimed in claim 11, wherein the radioactive substance is In111 or Tc99M

United States Patent

Patent Number: US 5141865
Date of Patent: 920825

MONOCLONAL ANTIBODIES WHICH BIND THROMBOXANE A2 RECEPTOR ANTAGONISTS AND DIAGNOSTIC METHODS BASED THEREON

Inventor(s): Croze, Edward M, San Ramon, CA, (US); Tu, Jan-I, Kendall Park , NJ, (US)
Assignee: E R Squibb & Sons, Inc, Princeton, NJ
Appl. No.: US 438548
Filed: 891117

Related U.S. Application Data

Priority Applic(Ser#,Date): US 438548 891117

Int. Cl. C12N-005/20; C07K-015/28
U.S. Cl. 530388900; 435007920; 435070210; 435172200; 435188000; 435240270; 436542000; 436548000; 530391300
Field of Search 424085800; 424088000; 435007920; 435070210; 435172200; 435240210; 436542000; 514381000; 530387000; 530388000; 530389000

Primary Examiner - Doll, John
Assistant Examiner - Budens, Robert D
Attorney, Agent or Firm - Bogden, James M

ABSTRACT

Monoclonal antibodies which bind thromboxane A2 receptor antagonists, hybrid cell lines which produce these monoclonal antibodies, and immunoassay methods for detecting thromboxane A2 receptor antagonists using these monoclonal antibodies.
015 Claims, 1 Drawing Figures, 1 Drawing Sheets

EXEMPLARY CLAIM

1. A hybridome cell line that produces a monoclonal antibody which binds the thromboxane A2 receptor antagonist (1S-(1 Beta , 2 Alpha (5Z),3 Alpha ,4 Beta))-7-(3-(((((1oxoheptyl)amino)acetyl)amino)methyl)-7-oxabi cyclo(2.2.1)hept-2yl)-5-heptenoic acid or a derivative thereof wherein said derivative has the following formula:

2-(R1-CH2-),3-(CH3-(CH2)5-CO-NH-CH2-CO-NH-CH2-)-7-OXABICYCLO(2.2.1)HEPTANE

wherein R1 is -CH=CH-CH2-COOH,

-CH2-COOH, -CH=CH-(CH2)3-CO-NH-BSA
or
(5-(I(125)-)IMIDAZOL-4-YL)-CH2-NH-CO-(CH2)3-CH=C

NON-EXEMPLARY CLAIMS

2. The hybridoma cell line according to claim 1 designated end having A.T.C.C. Accession Number HB 10235.
3. A hybridoma cell line having all of the identifying characteristics of the hybridoma cell line according to claim 2.
4. The monoclonal antibody secreted by the hybridoma cell line according to claims 2 or 3.
5. A monoclonal antibody secreted by the hybridoma cell line according to claim 1.
6. The monoclonal antibody according to claim 5 which is of the class IgG.
7. The monoclonal antibody according to claim 5 which is a murine monoclonal antibody.
8. The monoclonal antibody according to claim 5 designated MCTX1.
9. A monoclonal antibody having all of the identifying characteristics of the monoclonal antibody according to claim 8,

10. The monoclonal antibody according to claims 5 or 8 which has been derivatized by labeling with a detectable marker.
11. The monoclonal antibody according to claim 10 wherein the detectable marker is a radioisotope.
12. The monoclonal antibody according to claim 11 wherein the radioisotope is selected from the group consisting of 125I or 131I.
13. The monoclonal antibody according to claim 10 wherein the detectable marker is an enzyme.
14. The monoclonal antibody according to claims 5 or 8 which has been purified.
15. An antigen 30 binding fragment of the monoclonal antibody according to claims 5 or 8

United States Patent

Patent Number: US 5071962
Date of Patent: 911210

NUCLEOTIDE, DEDUCED AMINO ACID SEQUENCE, ISOLATION AND PURIFICATION OF HEAT-SHOCK CHLAMYDIAL PROTEINS; DETECTION; VACCINE AGAINST CHLAMYDIA INFECTION

Inventor(s): Caldwell, Harlan D, Hamilton, MT, (US); Morrison, Richard P, Hamilton, MT, (US)
Assignee: The United State of America as represented by the Department of Health and Human Services, Washington, DC
Appl. No.: US 531317
Filed: 900531

Related U.S. Application Data

Priority Applic(Ser#,Date): US 531317 900531
Int. Cl. A61K-035/14; C07K-013/00; C07K-015/00; C07K-003/00
U.S. Cl. 530389500; 435240270; 530808000; 530809000
Field of Search 435070210; 530387000; 530825000

Primary Examiner - Moskowitz, Margaret
Assistant Examiner - Cunninghamn, Thomas
Attorney, Agent or Firm - Cushman, Darby & Cushman

ABSTRACT

The present invention relates to novel polypeptides comprising a unique ''chlamydial-specific'' primary structural conformation and one or more of the biological properties of eukaryotic or prokaryotic stress-response proteins which are characterized by being the expressed products of an endogenous or exogenous DNA sequence in a eukaryotic or prokaryotic host cell. Sequences coding for part or all of the amino acid residues of the chlamydial HypA or HypB protein or for analogs thereof may be incorporated into autonomously replicating vectors employed to transform or transfect suitable procaryotic or eukaryotic host cells such as bacteria or vertebrate cells in culture. The HypB protein is a member of the family of stress response proteins referred to as HSP60. Products of expression of the DNA sequences display the identical physical, immunological, and histological properties as the chlamydial proteins isolated from natural, nonrecombinant, organisms.
004 Claims, 35 Drawing Figures, 29 Drawing Sheets

EXEMPLARY CLAIM

D R A W I N G

1. A monoclonal antibody which binds to the Chlamydial HypB protein genus-associated epitopes bound by monoclonal antibody GP57-5.

NON-EXEMPLARY CLAIMS

2. A monoclonal antibody which binds to the Chlamydial HypB protein genus-associated epitopes bound by monoclonal antibody GP57-19.
3. A monoclonal antibody having all the identifying characteristics of monoclonal antibody GP57-19 produced by the hybridoma cell line with the accession number ATCC HB10407.
4. A monoclonal antibody having all the identifying characteristics of monoclonal antibody GP57-5 produced by the hybridoma cell line with the accession number ATCC HB10408.

United States Patent

Patent Number: US 5037755
Date of Patent: 910806

MONOCLONAL ANTIBODY AND METHOD FOR DIAGNOSING GRAPE DISEASE EMPLOYING SAME; CROWN GALL

Inventor(s): Bishop, Andrew L, Geneva, NY, (US); Burr, Thomas J, Geneva, NY, (US); Mittak, Veronica L, Geneva, NY, (US)
Assignee: Cornell Research Foundation, Inc, Ithaca, NY
Appl. No.: US 127310
Filed: 871202

Related U.S. Application Data

Priority Applic(Ser#,Date): US 127310 871202

Int. Cl. C12N-005/20; C07K-015/28; C12P-021/08
U.S. Cl. 530388400; 435070210; 435172200; 435240270; 935104000; 935108000; 935110000
Field of Search 435240270; 435252200; 530387000; 530809000; 935104000; 935108000; 935110000

Primary Examiner - Kepplinger, Esther L
Assistant Examiner - Hutzell, Paula
Attorney, Agent or Firm - Sughrue, Mion, Zinn, Macpeak & Seas

ABSTRACT

A monoclonal antibody specific to Agrobacterium tumefaciens biovar 3. A method of diagnosing Agrobacterium tumefaciens biovar 3 associated grapevine disease comprising: (1) culturing bacteria from grapevine tissue suspected of being infected with Agrobacterium tumefaciens biovar 3; (2) reacting the bacteria with a monoclonal antibody specific to Agrobacterium tumefaciens biovar 3 under conditions sufficient to form an antigen-antibody complex between antigens specific to Agrobacterium tumefaciens biovar 3 and the monoclonal antibody; and (3) detecting the presence of the antigen-antibody complex. A method for diagnosing Agrobacterium tumefaciens biovar 3 associated grapevine disease from crown gall tissue comprising: (1) preparing separate suspensions of ground gall tissue to be diagnosed and of ground wood of the same cultivar as a control; (2) separately reacting specific to Agrobacterium tumefaciens biovar 3 under conditions sufficient to form an antigen-antibody complex between antigens specific to Agrobacterium tumefaciens biovar 3 and the monoclonal antibody; (3) assaying for the presence of the antigen-antibody complex ; and (4) comparing the assay results for the gall tissue to be diagnosed to the assays results for the wood control. A method for diagnosing agrobacterium tumefaciens biovar 3 associated grapevine disease from nonsymptomatic grapevine cuttings comprising: (1) separately flushing fluid through cuttings to be diagnosed and through uninfected control cuttings; (2) separately reactign the fluid flushed through the cuttings with monoclonal antiody specific to agrobacterium tumefaciens biovar 3 under conditions sufficient to form an antigen-antibody complex between antigens specific to Agrobacterium tumefaiens biovar 3 and the monoclonal antibody; (3) assaying for the presence of the antigen-antibody complex; and (4) comparing the assay results for said cuttings to be diagnosed to the assay results for the control cuttings. A hybridoma that secretes the above-described monoclonal antibody and a method of producing the hybridoma.
002 Claims

EXEMPLARY CLAIM

1. A monoclonal antibody which has all of the identifying characteristics of the monoclonal antibody secreted by murine hybridoma cell line F21-1D3G7C8 having ATCC deposit no. HB 9463.

NON-EXEMPLARY CLAIMS

2. A hybridoma which has all of the identifying characteristics of murine hybridoma cell line F21-1D3G7C8 having ATCC deposit no. HB 9463.

United States Patent

Patent Number: US 5011778
Date of Patent: 910430

MONOCLONAL ANTIBODIES DIRECTED TO IL-1 ACTIVATED ENDOTHELIAL CELLS AND MEDICAMENTS EMPLOYING THE MONOCLONAL ANTIBODIES; MEDICAMENT FOR BLOCKING INFLAMMATORY RESPONSES

Inventor(s): Newman, Walter, Rockville, MD, (US); Wilson, Diane O, Rockville, MD, (US)
Assignee: Otsuka Pharmaceutical Co, Ltd, Rockville, MD
Appl. No.: US 355701
Filed: 890523

Related U.S. Application Data

Priority Applic(Ser#,Date): US 355701 890523

Int. Cl. C12N-005/20; A61K-039/00; C07K-015/28
U.S. Cl. 424152100; 435070210; 435172200; 435240270; 530388200
Field of Search 424085800; 435070210; 435172200; 435240270; 530387000; 935104000

Primary Examiner - Kepplinger, Esther L
Assistant Examiner - Hutzell, Paula
Attorney, Agent or Firm - Sughrue, Mion, Zinn, Macpeak & Seas

ABSTRACT

Hybridoma cell lines are made that produce monoclonal antibodies having, among others, the following identifying characteristics: (1) bind to IL-1 activated endothelial cells; (2) do not bind significantly to normal resting endothelial cells; (3) do not bind significantly to normal resting or IL-1 activated epidermal keratinocytes or resting or IL-1 activated fibroblasts. The monoclonal antibodies are used in therapeutic compositions for blocking inflammatory responses associated with activated endothelial cells.
006 Claims, 8 Drawing Figures, 6 Drawing Sheets

EXEMPLARY CLAIM

D R A W I N G

1. A hybridoma having all the identifying characteristics of hybridoma cell line 7A9 having ATCC Deposit No. HB 10135.

NON-EXEMPLARY CLAIMS

2. The hybridoma of claim 1, which is hybridoma cell line 7A9 having ATCC Deposit No. HB 10135.
3. A monoclonal antibody having all the identifying characteristics of monoclonal antibody 7A9 produced by hybridoma 7A9 having ATCC Deposit No. HB 10135.
4. The monoclonal antibody of claim 3, which is monoclonal antibody 7A9 produced by hybridoma 7A9 having ATCC Deposit No. HB 10135.
5. A medicament for blocking inflammatory responses associated with activated endothelial cells, the medicament comprising: (A) a pharmaceutically effective amount of a monoclonal antibody having all the identifying characteristics of monoclonal antibody 7A9 produced by hybridoma 7A9 having ATCC Deposit No. HB 10135; and (B) a pharmaceutically acceptable carrier, diluent or excipient.
6. The medicament of claim 5, wherein the monoclonal antibody is monoclonal antibody 7A9 produced by hybridoma 7A9 having ATCC Deposit No. HB 10135

United States Patent

Patent Number: US 4935343
Date of Patent: 900619

MONOCLONAL ANTIBODIES FOR INTERLEUKIN-1 BETA; CONJUGATED TO A LABEL; BINDS AND FORMS IMMUNE COMPLEX WHICH IS DETECTED

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Assignee: Syntex (USA) Inc, Palo Alto, CA
Appl. No.: US 895003
Filed: 860808

Related U.S. Application Data

Priority Applic(Ser#,Date): US 895003 860808

Int. Cl. G01N-033/53;
U.S. Cl. 435007700; 424085100; 424085200; 435007900; 435007920; 435070210; 435172200; 435188000; 435240270; 435810000; 435962000; 436501000; 436512000; 436518000; 436548000; 436808000; 530351000; 530388230; 530391300
Field of Search 424085000; 424088000; 435007000; 435068000; 435172200; 435240270; 435810000; 436501000; 436512000; 436518000; 436548000; 436808000; 530387000; 530806000; 530808000; 530809000

Primary Examiner - Warden, Robert J
Assistant Examiner - Spiegel, Carol A
Attorney, Agent or Firm - Leitereg, Theodore J; Nyari, Linda J

ABSTRACT

The present invention is concerned with novel monoclonal antibodies which bind to Interleukin-1 Beta and do not bind to Interleukin-1 Beta . The antibodies bind to Interleukin-1 Beta and block receptor binding and biological activity. The antibodies find use in, for example, diagnostic methods such as an assay for the detection of Interleukin-1 Beta .
018 Claims, 7 Drawing Figures, 6 Drawing Sheets

EXEMPLARY CLAIM

1. An immunoassay method for the detection of Interleukin-1 Beta which comprises: contacting a sample suspected of containing Interleukin-1 Beta with a monoclonal antibody that binds to Interleukin-1 Beta and does not bind to Interleukin-1 Alpha ; that blocks binding of Interleukin-1 Beta to Interleukin-1 receptors; and, that binds to Interleukin-1 Beta and blocks biological activity of Interleukin-1 Beta , in order to form an immune complex; and determining the presence of said immune complex in order to detect Interleukin-1 Beta in said sample.

NON-EXEMPLARY CLAIMS

2. The method of claim 1 wherein said monoclonal antibody is selected from the group of monoclonal antibodies obtained from the group consisting of hybrid continuous cell lines having identifying characteristics of ILB1-H6 (ATCC designation HB 102019), ILB1-H21 (ATCC designation HB 10220), ILB1-H34 (ATCC designation HB 10221) and ILB1-H67 (ATCC designation HB 10222).
3. The method of claim 1 wherein said monoclonal antibody is conjugated to a label.
4. The method of claim 1 wherein said sample is a body fluid selected from the group consisting of whole blood, lymphatic fluid, serum, plasma, saliva, and urine.
5. A monoclonal antibody that binds to Interleukin-1 Beta and does not bind to Interleukin-1 Alpha ; that blocks binding of Interleukin-1 Beta to Interleukin-1 receptors; and, that binds to Interleukin-1 Beta and blocks biological activity of Interleukin-1 Beta .

6. The monoclonal antibody of claim 5 which is the antibody obtained from a hybrid continuous cell line having identifying characteristics of ILB1-H6 and ATCC designation HB 10219.
7. The monoclonal antibody of claim 5 which is the antibody obtained from a hybrid continuous cell line having identifying characteristics of ILB1-H21 and ATCC designation HB 10220.
8. The monoclonal antibody of claim 5 which is the antibody obtained from a hybrid continuous cell line having identifying characteristics of ILB1-H34 and ATCC designation HB 10221.
9. The monoclonal antibody of claim 5 which is the antibody obtained from a hybrid continuous cell line having identifying characteristics of ILB1-H67 and ATCC designation HB 10222.
10. The monoclonal antibody of claim 5 conjugated to a label.
11. The monoclonal antibody of claim 10 wherein said label is selected from the group consisting of enzymes, radioisotopes, particulate labels, chromogens, chemiluminescers, fluorescers, coenzymes, free radicals, and bacteriophages.
12. A hybrid continuous cell line having identifying characteristics of expressing the antibody of claim 5.
13. A hybrid continuous cell line selected from the group consisting of hybrid continuous cell lines having identifying characteristics of ILB1-H6 (ATCC designation HB 10219), ILB1-H21 (ATCC designation HB 10220), ILB1-H34 (ATCC designation HB 10221), ILB1-H67 (ATCC designation HB 10222).
14. A kit for use in an immunoassay comprising in one or more containers the monoclonal antibody of claim 5.
15. The kit of claim 14 wherein said monoclonal antibody is conjugated to a label.
16. The kit of claim 15 wherein said label is selected from the group consisting of enzymes, radioisotopes, particulate labels, chromogens, fluorescers, chemiluminescers, coenzymes, free radicals, and bacteriophages.
17. The kit of claim 14 wherein said monoclonal antibody is unlabeled and said kit further comprises a conjugate of a specific binding partner of said monoclonal antibody and a label capable of producing a detectable signal.
18. The kit of claim 14 wherein said monoclonal antibody is bound to a support

United States Patent

Patent Number: US 4894442
Date of Patent: 900116

MONOCLONAL ANTIBODIES THAT BIND TO ALPHA-ACID GLYCOPROTEIN; MEDICAL DIAGNOSIS

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Assignee: Kuraray Co, Ltd, Okayama, JP
Appl. No.: US 849328
Filed: 860408

Related U.S. Application Data

Priority Applic(Ser#,Date): JP 8578965 850412

Int. Cl. C07K-015/00;
U.S. Cl. 530387500; 435070210; 435172200; 435240270; 436548000; 530388250; 530388850; 935104000; 935110000
Field of Search 424085800; 424085910; 435007000; 435027000; 435068000; 435172200; 435240000; 436548000; 530387000; 530388000; 530395000; 530809000; 935100000; 935104000; 935108000; 935110000

Primary Examiner - Moskowitz, Margaret
Assistant Examiner - Cheney, Kay E

ABSTRACT

A monoclonal antibody specific for an Alpha 1-acid glycoprotein or for at least one antigenic determinant included in a sugar chain of the following formula:

D R A W I N G

wherein Gal means galactose, GlcNAc means N-acetylglucosamine, Man means mannose, Fuc means fucose, and n is 0 or 1, which is useful for the measurement of glycoproteins in cells, tissues and blood and therefore is useful for diagnosis of various diseases, particularly tumors, and a method for the production thereof by fusing a neoplasm cell line with antibody-producing cells from an animal which has been immunized against an desialylated glycoprotein and culturing the resultant hybridoma.
002 Claims, 3 Drawing Figures, 3 Drawing Sheets

EXEMPLARY CLAIM

1. A monoclonal antibody specific for Alpha 1-acid glycoprotein, which is selected from the group consisting of HA-5 and HA-7.
2. A monoclonal antibody having all the identifying characteristics of HA-13.

United States Patent

Patent Number: US 4885256
Date of Patent: 891205

MONOCLONAL ANTIBODIES TO CHOLESTEROL AND METHODS; SPECIFIC FOR HIGH CHOLESTEROL LIPOSOMES CONTAINING DICETYL PHOSPHATE AND DIMYRISTOYL PHOSPHATIDYL CHOLINE; MEDICAL DIAGNOSIS

Inventor(s): Alving, Carl R, Washington, DC, (US); Swartz, Jr, Glenn M, Laurel, MD, (US)
Assignee: The United States of America as represented by the United States Army, Washington, DC
Appl. No.: US 875048
Filed: 860617

Related U.S. Application Data

Priority Applic(Ser#,Date): US 875048 860617
Int. Cl. C07K-015/14; G01N-033/543; G01N-033/577
U.S. Cl. 436518000; 435172200; 435240270; 435948000; 436548000; 436817000; 436829000; 530388200; 530388250; 530809000; 530864000; 935102000; 935103000; 935110000
Field of Search 435007000; 435172200; 435240000; 435948000; 436518000; 436528000; 436548000; 436817000; 436829000; 530387000; 530809000; 935102000; 935103000; 935110000

Primary Examiner - Warden, Robert J
Assistant Examiner - Saunders, David A
Attorney, Agent or Firm - Bellamy, Werten F W

ABSTRACT

Monoclonal antibodies which demonstrate specific reactivity to cholesterol and methods for the detection of high levels of cholesterol by contacting biological specimens containing cholesterol with the monoclonal antibodies and measuring the formation of antigen-antibody complexes by immunosorbent assay.
011 Claims, 2 Drawing Figures, 1 Drawing Sheets

The invention described herein may be manufactured, used and licensed by or for the Government for Governmental purposes without the payment to us of any royalties thereon.

EXEMPLARY CLAIM

D R A W I N G

D R A W I N G

7. A METHOD FOR THE DETECTION OF CHOLESTEROL IN BIOLOGICAL SPECIMENS WHICH COMPRISES THE STEPS OF (1) CONTACTING THE BIOLOGICAL SPECIMENS WHICH MAY CONTAIN CHOLESTEROL WITH ANTIBODIES WHICH DEMONSTRATE REACTIVITY TO CHOLESTEROL AS EVIDENCED BY THE ABILITY TO INDUCE COMPLEMENT-DEPENDENT IMMUNE DAMAGE TO HIGH-CHOLESTEROL LIPOSOMES CONTAINING DIMYRISTOYL PHOSPHATIDYL CHOLINE, CHOLESTEROL AND DICETYL PHOSPHATE, BUT NOT TO LOW-CHOLESTEROL LIPOSOMES CONTAINING DIMYRISTOYL PHOSPHATIDYL CHOLINE, CHOLESTEROL AND DICETYL PHOSPHATE, (2) MEASURING THE FORMATION OF ANTIGEN-ANTIBODY COMPLEXES BY IMMUNOSORBENT ASSAYS AND (3) RELATING THE MEASUREMENTS OF STEP (2) TO THE PRESENCE OF OR CONCENTRATION OF CHOLESTEROL IN BIOLOGICAL SPECIMENS.

NON-EXEMPLARY CLAIMS

1. A monoclonal antibody demonstrating reactivity to cholesterol in biological specimens, the antibody being characterized by its ability to induce complement-dependent immune damage to high-cholesterol liposomes containing dimyristoyl phosphatidyl choline, cholesterol and dicetyl phosphate, but not low-cholesterol liposomes containing dimyristoyl

phosphatidyl choline, cholesterol and dicetyl phosphate.

2. A monoclonal antibody according to claim 1 which has the characteristics of the antibody produced by ATCC HB 8995.
3. The monoclonal antibody according to claim 1 wherein the high-cholesterol liposomes contain dimyristoyl phosphatidyl choline, cholesterol and dicetyl phosphate in molar ratios of 2: 5:0.22.
4. A composition comprising a hybrid continuous cell line that produces antibody having reactivity to cholesterol wherein said cell line comprises a hybrid of (1) a spleen cell from an animal immunized with liposomes containing dimyristoyl phosphatidyl choline, cholesterol and dicetyl phosphate fused to (2) a myeloma cell derived from the same animal species as the spleen cell.
5. A composition according to claim 4 wherein the animal spleen cell is a mouse spleen cell.
6. A composition according to claim 5 wherein the animal is immunized with liposomes containing dimyristoyl phosphatidyl choline, cholesterol and lipid-A in molar ratios of 2:5:0.02.
8. A method according to claim 7 wherein the biological specimens comprise lipid bilayers which mimic the characteristics of lipid bilayers of plasma membranes.
9. A method according to claim 7 wherein the antibodies have the identifying characteristics of an antibody produced by ATCC HB 8995.
10. A method according to claim 7 wherein the measurement of the formation of the antigen antibody complexes is carried out by solid phase enzyme-linked immunosorbent assays.
11. A method according to claim 7 wherein the biological specimen is from a mammal

United States Patent

Patent Number: US 4806629
Date of Patent: 890221

MONOCLONAL ANTIBODY TO A HUMAN THYMOCYTE ANTIGEN; HYBRIC CELL LINE-FOR DIAGNOSIS AND THERAPY

Inventor(s): Goldstein, Gideon, Short Hills, NJ, (US); Kung, Patrick C, Bridgewater, NJ, (US)
Assignee: Ortho Pharmaceutical Corporation, Raritan, NJ
Notice: Portion of the term of this patent, subsequent to 19991221 has been disclaimed
Appl. No.: US 30284
Filed: 870323

Related U.S. Application Data

Continuation of(Pat#,Ser#,Date):	ABANDONED		US 644185	840827
Division of(Pat#,Ser#,Date):	US 4364933		US 99970	791204
	ABANDONED		US 432454	821004
Priority Applic(Ser#,Date):	US 30284	870323		
	US 644185	840827		
	US 99970	791204		
	US 432454	821004		

Int. Cl. C07K-015/04; C12N-015/00; C12N-005/00; H61K-039/395
U.S. Cl. 530388750; 424154100; 435172200; 435240270
Field of Search 424085000; 435068000; 435172200; 435240000; 435240270; 436548000; 530387000

Primary Examiner - Hazel, Blondel

ABSTRACT

Hybrid cell line for production of monoclonal antibody to an antigen found on approximately 70% of normal human thymocytes. The hybrid is formed by fusing splenocytes from immunized CAF1 mice with P3X63Ag8U1 myeloma cells. Diagnostic and therapuetic uses of the monoclonal antibody are also disclosed.
003 Claims, 2 Drawing Figures, 1 Drawing Sheets

EXEMPLARY CLAIM

1. MOUSE MONOCLONAL ANTIBODY WHICH REACTS WITH AN ANTIGEN FOUND ON APPROXMIATELY 70% OF NORMAL HUMAN THYMOCYTES.

NON-EXEMPLARY CLAIMS

2. A monoclonal antibody produced by a hybridoma formed by fusion of cells from a mouse myeloma line and spleen cells from a mouse previously immunized with normal human thymoctyes which reacts with an antigen found on approximately 70% of normal human thymocytes.
3. Monoclonal antibody having the identifying characteristics of that produced by hybridoma ATCC CRL 8020.

United States Patent

Patent Number: US 4798806
Date of Patent: 890117

COMPOSITIONS AND METHODS USING A MONOCLONAL ANTIBODY TO A HUMAN T CELL ANTIGEN

Inventor(s): Goldstein, Gideon, Short Hills, NJ, (US); Kung, Patrick C, Bridgewater, NJ, (US)
Assignee: Ortho Pharmaceutical Corporation, Raritan, NJ
Appl. No.: US 892019
Filed: 860801

Related U.S. Application Data

Division of(Pat#,Ser#,Date):	US 4364937		US 110510	800108
	US 4614727		US 432457	821004
Priority Applic(Ser#,Date):	US 892019	860801		
	US 110510	800108		
	US 432457	821004		

Int. Cl. G01N-033/54;
U.S. Cl. 436548000;
Field of Search 424085000; 435041000; 435068000; 435172200; 435240000; 435241000; 435945000; 436548000; 530387000

Primary Examiner - Tarcza, John E
Attorney, Agent or Firm - Dellenbaugh, Geoffrey G; Grochala, Richard J

ABSTRACT

Hybrid cell line for production of monoclonal antibody to an antigen found on essentially all normal human T cells and on approximately 95% of normal human thymocytes. The hybrid is formed by fusing splenocytes from immunized CAF1 mice with P3X63Ag8U1 myeloma cells. Diagnostic and therapeutic uses of the monoclonal antibody are also disclosed.
007 Claims, 1 Drawing Figures, 1 Drawing Sheets

EXEMPLARY CLAIM

D R A W I N G

1. A METHOD FOR DETECTION OF A DEFICIENCY OR EXCESS OF OKT11+ CELLS IN AN INDIVIDUAL WHICH COMPRISES REACTING A LYMPHOCYTE COMPOSITION FROM SAID INDIVIDUAL WITH A DIAGNOSTICALLY-EFFECTIVE AMOUNT OF AN ANTIBODY AND MEASURING THE PERCENTAGE OF THE POPULATION WHICH REACTS WITH SAID ANTIBODY, WHEREIN SAID ANTIBODY IS A MONOCLONAL ANTIBODY OF CLASS IGG PRODUCED BY A HYBRIDOMA FORMED BY A FUSION OF SPLEEN CELLS FROM A MOUSE PREVIOUSLY IMMUNIZED WITH LEUKEMIC CELLS FROM A HUMAN WITH T-ALL AND CELLS FROM A MOUSE MYELOMA LINE, WHICH ANTIBODY: (A) REACTS WITH ESSENTIALLY ALL NORMAL HUMAN PERIPHERAL T CELLS AND WITH APPROXIMATELY 95% OF NORMAL HUMAN THYMOCYTES, BUT NOT WITH NORMAL HUMAN B CELLS OR NULL CELLS; (B) REACTS WITH EARLY, COMMON AND MATURE HUMAN THYMOCYTES AND WITH INDUCER AND CYTOTOXIC/SUPPRESSOR HUMAN T CELLS, BUT NOT WITH HUMAN PROTHYMOCYTES; AND (C) DEFINES A T CELL POPULATION WHICH IS LOWER THAN NORMAL LEVELS IN MYASTHENIA GRAVIS AND MULTIPLE SCLEROSIS; HIGHER THAN NORMAL LEVELS IN ACUTE GRAFT VERSUS HOST REACTION, HYPER IGE, ACUTE INFECTIOUS MONONUCLEOSIS, AND PRIMARY BILIARY CIRRHOSIS; AND COMPLETELY ABSENT IN ALL STAGES OF HODGKINS DISEASE AND PSORIASIS.

NON-EXEMPLARY CLAIMS

2. A method for detection of a deficiency or excess of OKT11+ cells in an individual which comprises reacting a lymphocyte composition from said individual with a diagnostically-effective amount of an antibody and measuring the percentage of the population which reacts with said antibody, wherein said antibody is a monoclonal antibody which reacts with a same antigen as the monoclonal antibody produced by ATCC CRL 8027.

3. The method of claim 2, wheren the monoclonal antibody reacts with essentially all normal human peripheral T cells and approximately 95% of normal human thymocytes and reacts with the same antigen as the monoclonal antibody produced by ATCC CRL 8027.
4. A diagnostic composition of matter for detection of OKT11+ cell excess or deficiency comprising, in admixture with a diagnostically acceptable carrier an amount of an antibody effective to detect OKT11+ cell excess or deficiency, wherein said antibody is a monoclonal antibody of class IgG produced by a hybridoma formed by fusion of spleen cells from a mouse previously immunized with leukemic cells from a human with T-All and cells from a mouse myeloma line, which antibody: (a) reacts with essentially all normal human peripheral T cells and with approximately 95% of normal human thymocytes, but not with normal human B cells or null cells; (b) reacts with early, common and mature human thymocytes and with inducer and cytotoxic/suppressor human T cells, but not with human prothymocytes; and (c) defines a T cell population which is lower than normal levels in myasthenia gravis and multiple sclerosis; higher normal levels in acute graft versus host reaction, hyper IGE, acute infectious mononucleosis, and primary biliary cirrhosis; and completely absent in all stages of Hodgkins Disease and psoriasis.
5. A diagnostic composition for detection of OKT11+ cells comprising, in admixture with a diagnostically acceptable carrier, an amount of antibody effective to detect said OKT11+ cells, said antibody having the identifying characteristics of antibody produced by hybridoma ATCC CRL 8027.
6. A diagnostic composition for detection of OKT11+ cells comprising, in admixture with a diagnostically acceptable carrier, an amount of antibody effective to detect OKT11+ cells, said antibody being a mouse monoclonal antibody that reacts with a same antigen as the monoclonal antibody produced by ATCC CRL 8027.
7. The composition of claim 6, wherein the monoclonal antibody reacts with essentially all normal human peripheral T cells and approximately 95% of normal human thymocytes and reacts with the same antigen as the monoclonal antibody produced by ATCC CRL 8027

United States Patent

Patent Number: US 4772551
Date of Patent: 880920

METHOD AND TEST KIT FOR DETECTING A TRICHOTHECENE USING NOVEL MONOCLONAL ANTIBODIES; ENZYME-LINKED IMMUNOSORBENT ASSAY

Inventor(s): Gendloff, Elie H, Lansing, MI, (US); Hart, L Patrick, Lansing , MI, (US); Pestka, James J, East Lansing, MI, (US)
Assignee: Neogen Corporation, Lansing, MI
Appl. No.: US 813499
Filed: 851226

Related U.S. Application Data

Priority Applic(Ser#,Date): US 813499 851226

Int. Cl. G01N-033/53;
U.S. Cl. 435007310; 435007930; 435028000; 435188000; 435810000; 436518000; 436548000; 436808000; 436822000; 530388500; 530807000; 530809000; 935093000; 935104000; 935110000
Field of Search 424085000; 424088000; 435007000; 435028000; 435810000; 435929000; 436518000; 436531000; 436548000; 436808000; 436822000; 530388000; 530807000; 530809000; 935093000; 935104000; 935110000

Primary Examiner - Warden, Robert J
Assistant Examiner - Benson, Robert
Attorney, Agent or Firm - McLeod, Ian C

ABSTRACT

A method for producing monoclonal antibodies to a trichothecene mycotoxin which are used in a test kit and method of testing are described. The method for producing the monoclonal antibodies uses repeated administration, preferably subcutaneously of a trichothecene polypeptide to a murine and production of a hybridoma to generate the monoclonal antibodies. Trichothecenes are detected in foods and the like using the test kit and method.
010 Claims

EXEMPLARY CLAIM

1. AN IMMUNOASSAY TEST KIT FOR DETECTING TRICHOTHECENE MYCOTOXIN T-2 IN A SAMPLE COMPRISING MONOCLONAL ANTIBODY WITH ALL THE IDENTIFYING CHARACTERISTICS OF THE MONOCLONAL ANTIBODY PRODUCED BY HYBRIDOMA IVI-10092 OR SAID MONOCLONAL ANTIBODY LABELED WITH A DETECTABLE MOIETY.

NON-EXEMPLARY CLAIMS

2. An immunoassay method for the detection of trichothecene mycotoxin T-2 in a sample comprising contacting said sample with monoclonal antibodies having all the identifying characteristics of the monoclonal antibodies secreted by hydridoma IVI-10092 under conditions leading to the formation of immunological complexes and detecting the formation of said complexes.
3. The hydridoma identified as IVI-10092.
4. The monoclonal antibody produced by the hybridoma identified as IVI-10092.
5. The test kit of claim 1 wherein said detectable moiety is an enzyme, and said enzyme is conjugated to said monoclonal antibody or to trichothecene mycotoxin T-2.
6. The test kit of claim 1 wherein said monoclonal antibody is bound to a solid phase, said detectable moiety is an enzyme, and said enzyme is conjugated to trichothecene mycotoxin T-2.
7. The test kit of claim 1, wherein said detectable moiety is an enzyme, said enzyme is conjugated to said monoclonal antibody, and further comprising a conjugate of trichothecene mycotoxin T-2 and a polypeptide, said conjugate is bound to a solid phase.
8. The test kit of claim 5 wherein said enzyme is peroxidase.

9. The method of claim 2 wherein said monoclonal antibodies are bound to a solid phase, and said detecting comprises adding a known amount of a trichothecene mycotoxin T-2 conjugated to an enzyme to said sample to compete with any trichothecene mycotoxin T-2 in said sample to form complexes with said antibodies.
10. The method of claim 2 wherein said monoclonal antibodies are conjugated to an enzyme, and said detecting comprises adding said antibody to said sample, wherein said sample is in contact with a solid phase bound conjugate of trichothecene mycotoxin T-2 and a polypeptide, said conjugate competes with any trichothecene mycotocin T-2 in said sample to form complexes with said antibodies

United States Patent

Patent Number: US 4709015
Date of Patent: 871124

MONOCLONAL ANTIBODY TO HUMAN SUPPRESSOR T CELLS; DIAGNOSIS AND TREATMENT OF DISEASES

Inventor(s): Goldstein, Gideon, Short Hills, NJ, (US); Kung, Patrick C, Bridgewater, NJ, (US)
Assignee: Ortho Pharmaceutical Corporation, Raritan, NJ
Notice: Portion of the term of this patent, subsequent to 19991130 has been disclaimed
Appl. No.: US 639161
Filed: 840809

Related U.S. Application Data

Division of(Pat#,Ser#,Date):	US 4361550		US 99969	791204
			US 432460	821004
Priority Applic(Ser#,Date):	US 639161	840809		
	US 99969	791204		
	US 432460	821004		

Int. Cl. G01N-033/577; A61K-039/00
U.S. Cl. 530388750; 424154100; 435043000; 435070210; 435172200; 435240270; 435948000; 935104000; 935105000
Field of Search 424085000; 435043000; 435068000; 435172200; 435240000; 435241000; 435948000; 530387000; 935104000; 935105000

Primary Examiner - Nucker, Christine M
Attorney, Agent or Firm - Dellenbaugh, Geoffrey G; Grochala, Richard J; Lipow, Jason

ABSTRACT

Hybrid cell line for production of monoclonal antibody to an antigen found on normal human suppressor T cells. The hybrid is formed by fusing splenocytes from immunized CAF1 mice with P3X63Ag8Ul myeloma cells. Diagnostic and therapeutic uses of the monoclonal antibody are also disclosed.
003 Claims, 2 Drawing Figures, 2 Drawing Sheets

EXEMPLARY CLAIM

1. A MONOCLONAI ANTIBODY PRODUCED BY A HYBRIDOMA FORMED BY FUSION OF CELLS FROM A MOUSE MYELOMA LINE AND SPLEEN CELLS FROM A MOUSE PREVIOUSLY IMMUNIZED WITH HUMAN THYMOCYTES, WHICH ANTIBODY REACTS WITH HUMAN SUPPRESSOR T CELLS.

NON-EXEMPLARY CLAIMS

2. A monoclonai antibody which is produced from a hybridoma having the identifying characteristics of ATCC 8014.
3. A monoclonai antibody having the identifying characteristics of the antibody secreted by ATCC 8014; said identifying characteristics comprising reacting with normal human suppressor T cells but not with normal human B cells.

United States Patent

Patent Number: US 4691010
Date of Patent: 870901

HYBRID CELL LINE FOR PRODUCING MONOCLONAL ANTIBODY TO A HUMAN EARLY THYMOCYTE ANTIGEN, ANTIBODY, AND METHODS

Inventor(s): Goldstein, Gideon, Short Hills, NJ, (US); Kung, Patrick C, Bridgewater, NJ, (US)
Assignee: Ortho Pharmaceutical Corporation, Raritan, NJ
Notice: Portion of the term of this patent, subsequent to 19991221 has been disclaimed
Appl. No.: US 639162
Filed: 840809

Related U.S. Application Data

Division of(Pat#,Ser#,Date): US 4364934 US 100071 791204
US 4624925 US 432458 821004
Priority Applic(Ser#,Date): US 639162 840809
US 100071 791204
US 432458 821004

Int. Cl. A61K-039/395; A61K-035/16; C12N-005/00; C12P-021/00
U.S. Cl. 530388750; 424154100; 435070210; 435240270; 530388730; 530809000; 935104000
Field of Search 424085000; 435068000; 435172200; 435240000; 435241000; 435948000; 436548000; 530387000; 935104000

Primary Examiner - Warren, Charles F
Assistant Examiner - Tarcza, John Edward
Attorney, Agent or Firm - Dellenbaugh, Geoffrey G

ABSTRACT

Hybrid cell line for production of monoclonal antibody to an antigen found on approximately 10% of normal human thymocytes. The hybrid is formed by fusing splenocytes from immunized CAF1 mice with P3X63Ag8Ul myeloma cells. Diagnostic and therapeutic uses of the monoclonal antibody are also disclosed.
001 Claims, 2 Drawing Figures, 2 Drawing Sheets

EXEMPLARY CLAIM

D R A W I N G

1. A MONOCLONAL ANTIBODY HAVING THE IDENTIFYING CHARACTERISTICS OF THE PRODUCT OF HYBRIDOMA ATCC 8021.

United States Patent

Patent Number: US 4680383
Date of Patent: 870714

MONOCLONAL ANTIBODY TO HUMAN T CELLS

Inventor(s): Goldstein, Gideon, Short Hills, NJ, (US); Kung, Patrick C, Bridgewater, NJ, (US)
Assignee: Ortho Pharmaceutical, Raritan, NJ
Notice: Portion of the term of this patent, subsequent to 19991214 has been disclaimed
Appl. No.: US 639563
Filed: 840810

Related U.S. Application Data

Division of(Pat#,Ser#,Date):	US 4363799	US 22132 790320
	US 4515894	US 432453 821004
Priority Applic(Ser#,Date):	US 639563	840810
	US 22132	790320
	US 432453	821004

Int. Cl. C07K-015/00; A61K-039/395
U.S. Cl. 530388750; 424154100; 435172200
Field of Search 260112000B; 260112000R; 424085000; 435068000; 435172200; 435240000; 436548000; 530387000; 935085000

Primary Examiner - Hazel, Blondel
Attorney, Agent or Firm - Dellenbaugh, Geoffrey G

ABSTRACT

Hybrid cell line for producing of monoclonal antibody to an antigen found on all normal human T cells. The hybrid is formed by fusing splenocytes from immunized Balb/cJ mice with P3X63Ag8U1 myeloma cells. Diagnostic and therapeutic uses of the monoclonal antibody are also disclosed.
004 Claims, 5 Drawing Figures, 2 Drawing Sheets

EXEMPLARY CLAIM

1. MOUSE MONOCLONAL ANTIBODY WHICH REACTS WITH ESSENTIALLY ALL NORMAL HUMAN PERIPHERAL T CELLS.

NON-EXEMPLARY CLAIMS

2. A monoclonal antibody produced by a hybridoma formed by fusion of cells from a mouse myeloma line and spleen cells from a mouse previously immunized with normal human T cells which reacts with essentially all normal human peripheral T cells.
3. Mouse monoclonal antibody which reacts with an antigen found on essentially all normal human peripheral T cells.
4. Mouse monoclonal antibody having the identifying characteristics of antibody produced by hybridoma ATCC CRL 8000.

United States Patent

Patent Number: US 4658020
Date of Patent: 870414

MONOCLONAL ANTIBODY TO HUMAN HELPER T CELLS; FUSION OF SPLEEN AND MYELOMA CELLS FROM MICE; CANCER TREATMENT

Inventor(s): Goldstein, Gideon, Short Hills, NJ, (US); Kung, Patrick C, Bridgewater, NJ, (US)
Assignee: Ortho Pharmaceutical Corporation, Raritan, NJ
Notice: Portion of the term of this patent, subsequent to 20000426 has been disclaimed
Appl. No.: US 639554
Filed: 840810

Related U.S. Application Data

Division of(Pat#,Ser#,Date):	US 4381295		US 33639	790426
	US 4515895		US 432459	821004
Priority Applic(Ser#,Date):	US 639554	840810		
	US 33639	790426		
	US 432459	821004		

Int. Cl. C07K-015/00; A61K-039/395
U.S. Cl. 530388750; 424154100; 435172200; 530388730
Field of Search 260112000B; 260112000R; 424085000; 435068000; 435172200; 435240000; 436548000; 530387000

Primary Examiner - Hazel, Blondel
Attorney, Agent or Firm - Dellenbaugh, Geoffrey G

ABSTRACT

Hybrid cell line for production of monoclonal antibody to an antigen found on all normal human helper T cells. The hybrid is formed by fusing splenocytes from immunized CAF1 mice with P3X63Ag8U1 myeloma cells. Diagnostic and therapeutic uses of the monoclonal antibody are also disclosed.
003 Claims

EXEMPLARY CLAIM

1. MOUSE MONOCLONAL ANTIBODY WHICH REACTS WITH ESSENTIALLY ALL NORMAL HUMAN PERIPHERAL HELPER T CELLS.

NON-EXEMPLARY CLAIMS

2. A monoclonal antibody produced by a hybridoma formed by fusion of cells from a mouse myeloma line and spleen cells from a mouse previously immunized with normal human T cells which reacts with essentially all normal human peripheral helper T cells.
3. Monoclonal antibody having the identifying characteristics of that produced by hybridoma ATCC CRL 8002.

United States Patent

Patent Number: US 4654210
Date of Patent: 870331

METHODS AND COMPOSITIONS USING COMPLEMENT FIXING MONOCLONAL ANTIBODY TO HUMAN T CELLS; REDUCE TRANSPLANT REJECTION, DIAGNOSIS, LYMPHOCYTES, RATIOS

Inventor(s): Goldstein, Gideon, Short Hills, NJ, (US); Kung, Patrick C, Bridgewater, NJ, (US)
Assignee: Ortho Pharmaceutical Corporation, Raritan, NJ
Appl. No.: US 709232
Filed: 850306

Related U.S. Application Data

Division of(Pat#,Ser#,Date):	US 4361549		US 33669	790426
	US 4515893		US 432452	821004
Priority Applic(Ser#,Date):	US 709232	850306		
	US 33669	790426		
	US 432452	821004		

Int. Cl. A61K-039/395; C12N-015/00; G01N-033/53
U.S. Cl. 424154100; 435007240; 435172200; 435240270; 436548000; 530388750; 935107000
Field of Search 260112000B; 260112000R; 424085000; 435172200; 435240000; 435543000; 436548000

Primary Examiner - Hazel, Blondel
Attorney, Agent or Firm - Dellenbaugh, Geoffrey G

ABSTRACT

Hybrid cell line for production of monoclonal antibody to an antigen found on all normal human T cells and cutaneous T lymphoma cells. The hybrid is formed by fusing splenocytes from immunized CAF1 mice with P3X63Ag8U1 myeloma cells. Diagnostic and therapeutic uses of the monoclonal antibody are also disclosed.
015 Claims, 5 Drawing Figures, 1 Drawing Sheets

EXEMPLARY CLAIM

1. A THERAPEUTIC COMPOSITION OF MATTER COMPRISING, IN ADMIXTURE WITH A PHARMACEUTICALLY-ACCEPTABLE CARRIER, A THERAPEUTICALLY EFFECTIVE AMOUNT OF A MOUSE MONOCLONAL ANTIBODY, SAID AMOUNT BEING EFFECTIVE TO REDUCE OR ELIMINATE THE REJECTION OF A TRANSPLANT BY AN ORGAN TRANSPLANT RECIPIENT, SAID MONOCLONAL ANTIBODY FIXING COMPLEMENT AND REACTING WITH ESSENTIALLY ALL NORMAL HUMAN PERIPHERAL T CELLS, BUT NOT WITH NORMAL HUMAN PERIPHERAL B CELLS, NULL CELLS, OR MACROPHAGES.

6. A METHOD OF TREATMENT OF AN ORGAN TRANSPLANT RECIPIENT TO REDUCE OR ELIMINATE REJECTION OF SAID TRANSPLANTED ORGAN WHICH COMPRISES ADMINISTRATION TO SAID RECIPIENT OF AN AMOUNT OF MOUSE MONOCLONAL ANTIBODY EFFECTIVE TO CAUSE SAID REDUCTION OR ELIMINATION, SAID ANTIBODY FIXING COMPLEMENT AND REACTING WITH ESSENTIALLY ALL NORMAL HUMAN PERIPHERAL T CELLS.

14. A METHOD FOR DETERMINING IN AN INDIVIDUAL THE PROPORTION OF CIRCULATING LYMPHOCYTES THAT ARE T CELLS WHICH COMPRISES MIXING AN EFFECTIVE DETERMINING AMOUNT OF A MONOCLONAL ANTIBODY WITH A CIRCULATING LYMPHOCYTE COMPOSITION FROM SAID INDIVIDUAL AND DETERMINING THE PROPORTION OF THE CIRCULATING LYMPHOCYTES WHICH REACT WITH SAID ANTIBODY, AND ARE THUS T CELLS, WHICH ANTIBODY: (A) REACTS WITH ESSENTIALLY ALL NORMAL HUMAN PERIPHERAL T CELLS AND CUTANEOUS T LYMPHOMA CELLS, BUT NOT WITH NORMAL HUMAN PERIPHERAL B CELLS, NULL CELLS OR MACROPHAGES; (B) REACTS WITH FROM ABOUT 5% TO ABOUT 10% OF NORMAL HUMAN THYMOCYTES; (C) REACTS WITH LEUKEMIC CELLS FROM HUMANS WITH T CELL CHRONIC LYMPHOBLASTIC LEUKEMIC BUT DOES NOT REACT WITH LEUKEMIC CELLS FROM HUMANS WITH T CELL ACUTE LYMPHOBLASTIC LEUKEMIA, NULL CELL ACUTE LYMPHOBLASTIC LEUKEMIA, OR B CELL CHRONIC LYMPHATIC LEUKEMIA; (D) REACTS WEAKLY WITH THE HUMAN T CELL LINE HJD-1 BUT DOES NOT REACT WITH CEM, LAZ 191, OR HML; (E) DOES NOT REACT WITH THE EPSTEIN-BARR VIRUS-TRANSFORMED HUMAN B CELL LINES LAZ 007, LAZ 156, LAZ 256, OR SB; AND (F) FIXED

COMPLEMENT.

NON-EXEMPLARY CLAIMS

2. A therapeutic composition of matter comprising, in admixture with a pharmaceutically-acceptable carrier, a therapeutically effective amount of a mouse monoclonal antibody, said amount being effective to reduce or eliminate the rejection of a transplant by an organ transplant recipient, said monoclonal antibody fixing complement and reacting with essentially all normal human peripheral T cells.
3. A method of treatment of an organ transplant recipient to reduce or eliminate rejection of said transplanted organ which comprises administration to said recipient of an amount of mouse monoclonal antibody effective to cause said reduction or elimination, said antibody fixing complement and reacting with essentially all normal human peripheral T cells but not with normal human peripheral B cells, null cells, or macrophages.
4. A therapeutic composition of matter comprising, in admixture with a pharmaceutically acceptable carrier, a therapeutically-effective amount of monoclonal antibody produced from a hydriboma having the identifying characteristics of ATCC CRL 8001 said amount being effective to reduce or eliminate the rejection of a transplant by an organ transplant recipient.
5. A therapeutic composition of matter comprising, in admixture with a pharmaceutically acceptable carrier, a therapeutically-effective amount of monoclonal antibody, said amount being effective to reduce or eliminate the rejection of a transplant by an organ transplant recipient, which antibody: (a) reacts with essentially all normal human peripheral T cells and cutaneous T lymphoma cells, but not with normal human peripheral B cells, null cells or macrophages; (b) reacts with from about 5% to about 10% of normal human thymocytes; (c) reacts with leukemic cells from humans with T cell chronic lymphoblastic leukemia but does not react with leukemic cells from humans with T cell acute lymphoblastic leukemia, null cell acute lymphoblastic leukemia, or B cell chronic lumphatic leukemia; (d) reacts weakly with the human T cell line HJD-1 but does not react with CEM, Laz 191, or HMl; (e) does not react with the Epstein-Barr virus-transformed human B cell lines Laz 007, Laz 156, Laz 256, or SB; and (f) fixed complement.
7. A method of treatment of an organ transplant recipient to reduce or eliminate allograft rejection of said transplanted organ which comprises administration of an amount of monoclonal antibody effective to cause said reduction or elimination, which antibody: (a) reacts with essentially all normal human peripheral T cells and cutaneous T lymphoma cells, but not with normal human peripheral B cells, null cells or macrophages; (b) reacts with from about 5% to about 10% of normal human thymocytes; (c) reacts with leukemic cells from humans with T cell chronic lymphoblastic leukemia but does not react with leukemic cells from humans with T cell acute lymphoblastic leukemia, null cell acute lymphoblastic leukemia, or B cell chronic lymphatic leukemia; (d) reacts weakly with the human T cell line HJD-1 but does not react with CEM, Laz 191, or HM1; (e) does not react with the Epstein-Barr virus-transformed human B cell lines Laz 007, Laz 156, Laz 256, or SB; and (f) fixes complement.
8. The method of claim 7 wherein the antibody is produced from a hybridoma having the identifying characteristics of ATCC CRL 8001.
9. A diagnostic composition for determining in an individual the proportion of circulating lymphocytes that are T cells which comprises a diagnostically-effective amount of a mouse monoclonal antibody that fixed complement and reacts with essentially all normal human peripheral T cells, but not with normal human peripheral B cells, null cells, or macrophages, said antibody being admixed with a diagnostically acceptable carrier.
10. A diagnostic composition for determining in an individual the proportion of circulating lymphocytes that are T cells which comprises a diagnostically-effective amount of a mouse monoclonal antibody that fixed complement and reacts with essentially all normal human peripheral T cells, said antibody being admixed with a diagnostically acceptable carrier11. A diagnostic composition for determining in an individual the proportion of circulating lymphocytes that are T cells which comprises a diagnostically-effective amount of a mouse monoclonal antibody that reacts with essentially all normal human peripheral T cells, but not with normal human peripheral B cells, null cells, or macrophages, said

antibody being admixed with a diagnostically acceptable carrier.

12. A diagnostic composition for determining in an individual the proportion of circulating lymphocytes that are T cells which comprises a diagnostically-effective amount of a mouse monoclonal antibody that reacts with essentially all normal human peripheral T cells, said antibody being admixed with a diagnostically acceptable carrier.

13. A diagnostic composition for determining in an individual the proportion of circulating lymphocytes that are T cells which comprises a diagnostically-effective amount of a mouse monoclonal antibody having the identifying characteristics of that produced by hybridoma ATCC CRL 8001, said antibody being in admixture with a diagnostically acceptable carrier.

15. A method for determining in an individual the proportion of circulating lymphocytes that are T cells which comprises mixing an effective determining amount of antibody produced from a hybridoma having the identifying characteristics of OKT3 with a circulating lymphocyte composition from said individual and determining the proportion of the circulating lymphocytes which react with said antibody, and are thus T cells

United States Patent

Patent Number: US 4652447
Date of Patent: 870324

METHODS AND COMPOSITIONS USING MONOCLONAL ANTIBODY TO HUMAN HELPER T CELLS

Inventor(s): Goldstein, Gideon, Short Hills, NJ, (US); Kung, Patrick C, Bridgewater, NJ, (US)
Assignee: Ortho Pharmaceutical Corporation, Raritan, NJ
Appl. No.: US 709231
Filed: 850306

Related U.S. Application Data

Division of(Pat#,Ser#,Date):	US 4381295		US 33639	790426
	US 4515895		US 432459	821004
Priority Applic(Ser#,Date):	US 709231	850306		
	US 33639	790426		
	US 432459	821004		

Int. Cl. A61K-039/395; C12N-015/00; G01N-033/53
U.S. Cl. 424154100; 435007240; 435172200; 435240270; 436548000; 530388750; 935107000
Field of Search 424085000; 435068000; 435172200; 435240000; 436548000

Primary Examiner - Hazel, Blondel
Attorney, Agent or Firm - Dellenbaugh, Geoffrey G

ABSTRACT

Hybrid cell line for production of monoclonal antibody to an antigen found on all normal human helper T cells. The hybrid is formed by fusing splenocytes from immunized CAF1 mice with P3X63Ag8U1 myeloma cells. Diagnostic and therapeutic uses of the monoclonal antibody are also disclosed.
012 Claims, 7 Drawing Figures, 2 Drawing Sheets

EXEMPLARY CLAIM

1. A THERAPEUTIC COMPOSITION OF MATTER COMPRISING, IN ADMIXTURE WITH A PHARMACEUTICALLY-ACCEPTABLE CARRIER, AN AMOUNT OF MOUSE MONOCLONAL ANTIBODY EFFECTIVE TO REDUCE THE AMOUNT OF HELPER T CELLS IN AN INDIVIDUAL HAVING AN EXCESS OF SAID HELPER T CELLS, SAID ANTIBODY REACTING WITH ESSENTIALLY ALL NORMAL HUMAN PERIPHERAL HELPER T CELLS BUT NOT WITH NORMAL HUMAN PERIPHERAL B CELLS, NULL CELLS, MACROPHAGES.

6. A DIAGNOSTIC COMPOSITION FOR DETECTION OF HUMAN HELPER T CELLS COMPRISING, IN ADMIXTURE WITH A DIAGNOSTICALLY ACCEPTABLE CARRIER, AN AMOUNT OF MOUSE MONOCLONAL ANTIBODY EFFECTIVE TO DETECT HUMAN HELPER T CELLS, SAID ANTIBODY REACTING WITH ESSENTIALLY ALL NORMAL HUMAN PERIPHERAL HELPER T CELLS.

11. A METHOD FOR DETECTION OF HELPER T CELL DEFECT OR EXCESS IN AN INDIVIDUAL WHICH COMPRISES REACTING A T CELL COMPOSITION FROM SAID INDIVIDUAL WITH A DIAGNOSTICALLY EFFECTIVE AMOUNT OF MONOCLONAL ANTIBODY AND MEASURING THE PERCENTAGE OF THE TOTAL PERIPHERAL T CELL POPULATION WHICH REACTS WITH SAID ANTIBODY, WHICH ANTIBODY: (A) REACTS WITH ESSENTIALLY ALL NORMAL HUMAN PERIPHERAL HELPER T CELLS (BEING ABOUT 55% OF ALL NORMAL HUMAN PERIPHERAL T CELLS), BUT NOT WITH NORMAL HUMAN PERIPHERAL B CELLS, NULL CELLS OR MACROPHAGES; (B) REACTS WITH ABOUT 80% OF NORMAL HUMAN THYMOCYTES; (C) DOES NOT REACT WITH LEUKEMIC CELLS FROM HUMANS WITH T CELL CHRONIC LYMPHOBLASTIC LEUKEMIA, B CELL CHRONIC LYMPHOBLASTIC LEUKEMIA, T CELL ACUTE LYMPHOBLASTIC LEUKEMIA, OR NULL CELL ACUTE LYMPHOBLASTIC LEUKEMIA; (D) REACTS WITH THE HUMAN T CELL LINE CEM, BUT NOT WITH HJD-1, LAZ 191, OR HM1; (E) DOES NOT REACT WITH EPSTEIN-BARR VIRUS-TRANSFORMED HUMAN B CELL LINES LAZ 007, LAZ 156, LAZ 256, OR SB; (F) REACTS WITH ABOUT 55% OF RHESUS MONKEY PERIPHERAL T CELLS; (G) FIXES COMPLEMENT; AND (H) DEFINES A T CELL POPULATION WHICH IS UNREACTIVE WITH ANTITH2 SERUM AND IS ONLY MINIMALLY CYTOTOXIC.

NON-EXEMPLARY CLAIMS

2. A therapeutic composition of matter comprising, in admixture with a pharmaceutically-acceptable carrier, an amount of mouse monoclonal antibody effective to reduce the amount of helper T cells in an individual having an excess of said helper T cells, said antibody reacting with essentially all normal human peripheral helper T cells.
3. A therapeutic composition of matter comprising, in admixture with a pharmaceutically-acceptable carrier, an amount of monoclonal antibody effective to reduce the amount of helper T cells in an individual having an excess of said helper T cells, said monoclonal antibody being produced from a hybridoma formed by fusion of cells from a mouse myeloma line and spleen cells from a mouse previously immunized with human T cells, said antibody reacting with essentially all normal human peripheral helper T cells but not with normal human peripheral B cells, null cells, or macrophages.
4. A therapeutic composition of matter comprising, in admixture with a pharmaceutically-acceptable carrier, an amount of a monoclonal antibody effective to reduce the amount of helper T cells in an individual having an excess of said helper T cells, said monoclonal antibody being produced by a hybridoma formed by fusion of cells from a mouse myeloma line and spleen cells from a mouse previously immunized with human T cells, said monoclonal antibody reacting with essentially all normal human peripheral helper T cells.
5. A therapeutic composition of matter comprising, in admixture with a pharmaceutically acceptable carrier, an amount of monoclonal antibody effective to reduce the amout of helper T cells in an individual having an excess of said helper T cells, which antibody: (a) reacts with essentially all normal human peripheral helper T cells (being about 55% of all normal human peripheral T cells), but not with normal human peripheral B cells, null cells or macrophages; (b) reacts with about 80% of normal human thymocytes; (c) does not react with leukemic cells from humans with T cell chronic lymphoblastic leukemia, B cell chronic lymphoblastic leukemia, T cell acute lymphoblastic leukemia, or null cell acute lymphoblastic leukemia; (d) reacts with the human T cell line CEM, but not with HJD-1, Laz 191, or HM1; (d) does not react with Epstein-Barr virus-transformed human B cell lines Laz 007, Laz 156, Laz 256, or SB; (f) reacts with about 55% of Rhesus monkey peripheral T cells; (g) fixes complement; and (h) defines a T cell population which is unreactive with anti-TH2 serum, and is only minimally cytotoxic.
7. A diagnostic composition of matter for detection of human helper T cells comprising, in admixture with a diagnostically acceptable carrier, an amount of mouse monoclonal antibody effective to detect human helper T cells, said antibody reacting with essentially all normal human peripheral helper T cells but not with normal human peripheral B cells, null cells, or macrophages.
8. A diagnostic composition for detection of human helper T cells comprising, in admixture with a diagnostically acceptable carrier, a diagnostically effective amount of mouse monoclonal antibody having the identifying characteristics of that produced by hybridoma ATCC CRL 8002.
9. A diagnostic composition for detection of human helper T cells comprising, in admixture with a diagnostically acceptable carrier, an amount of mouse monoclonal antibody effective to detect helper T cells, said antibody reacting with essentially all normal human peripheral helper T cells but not with normal human peripheral B cells.
10. A diagnostic composition of matter for detection of helper T cell deficiency or excess comprising, in admixture with a diagnostically acceptable carrier, an amount of monoclonal antibody effective to detect helper T cell deficiency, which antibody: (a) reacts with essentially all normal human peripheral helper T cells (being about 55% of all normal human peripheral T cells) but not with normal human peripheral B cells, null cells or mcarophages; (b) reacts with about 80% of normal human thymocytes; (c) does not react with leukemic cells from humans with T cell chronic lymphoblastic leukemia, B cell chronic lymphoblastic leukemia, T cell acute lymphoblastic leukemia, or null cell acute lymphoblastic leukemia; (d) reacts with the human T cell line CEM, but not with HJD-1, Laz 191, or HM1; (e) does not react with Epstein-Barr virus-transformed human B cell lines Laz 007, Laz 156, Laz 256, or SB; (f) reacts with about 55% of Rhesus monkey peripheral T cells; (g) fixes complement; and (h) defines a T cell population which is unreactive with anti-TH2 serum and is only minimally cytotoxic.
12. The method of claim 11 wherein the helper T cell deficiency is type II acquired agammaglobulinemia

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MONOCLONAL ANTIBODY WITH SPECIFICITY TO HUMAN SMALL CELL CARCINOMA AND USE THEREOF; DIAGNOSIS AND THERAPY

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ABSTRACT

Monoclonal antibody reactive with SCC cells and unreactive with human neuroblastoma cells, human squamous cell carcinoma cells, and human large-cell undifferentiated lung carcinoma cells.
015 Claims

EXEMPLARY CLAIM

1. A MONOCLONAL ANTIBODY WHICH STRONGLY BINDS TO SMALL CELL CARCINOMA CELLS COMPARED TO THE BINDING OF SAID MONOCLONAL ANTIBODY TO HUMAN NEUROBLASTOMA CELLS, HUMAN SQUAMUS CELL CARCINOMA CELLS, AND HUMAN LARGE-CELL UNDIFFERENTIATED LUNG CARCINOMA CELLS, IN A RADIOIMMUNOASSAY IN WHICH SAID CELLS ARE INCUBATED WITH SAID MONOCLONAL ANTIBODY AND A RADIOLABELED SECOND ANTIBODY CAPABLE OF BINDING TO SAID MONOCLONAL ANTIBODY, SAID ANTIBODY RECOGNIZING AN APPROXIMATELY 50,000 DALTON ANTIGENIC DETERMINANT ON THE SURFACE OF SMALL CELL CARCINOMA CELLS.

NON-EXEMPLARY CLAIMS

2. The antibody of claim 1, wherein said antibody is of the IgM or IgG2 isotype.
3. The antibody of claim 1, wherein said antibody recognizes an approximately 25,000 dalton antigenic determinant on the surface of small cell carcinoma cells.
4. The antibody of claim 1, wherein said antibody is coupled to a cytotoxic agent.
5. The antibody of claim 1, wherein said antibody is labeled with a detectable label.
6. The antibody of claim 5, wherein said antibody is radiolabeled.
7. The antibody of claim 5, wherein said antibody is fluorescently labeled.
8. The antibody of claim 1, wherein said antibody is capable, in the presence of complement, of lysing small cell carcinoma cells in vitro.
9. The monoclonal antibody produced by the hybridoma cell given ATCC Accession No. HB8462.
10. A hybridoma cell capable of producing a monoclonal antibody having the immunological identifying characteristics of the monoclonal antibody produced by hybridoma cell line ATCC Accession No. HB8462.

11. The hybridoma cell given ATTC Accession No. HB8462.
12. A method of detecting the presence of small cell carcinoma cells in a human patient comprising incubating a cell-containing clinical sample from said patient with a monoclonal antibody having the immunological identifying characteristics of the monoclonal antibody produced by hybridoma cell line ATCC Accession No. HB 8462 under conditions sufficient to permit formation of immune complexes and detecting said immune complexes as an indication of the presence of small cell carcinoma cells.
13. A method of lysing small cell carcinoma cells in a clinical sample comprising incubating said sample with a monoclonal antibody having the immunological identifying characteristic of the monoclonal antibody produced by hybridoma cell line ATCC Accession No. HB8462 in the presence of complement under conditions which permit lysis.
14. A method of lysing small cell carcinoma cells in a clinical sample from a patient comprising incubating said sample with an immunotoxin consisting of (1) a monoclonal antibody having the immunological identifying characteristics of the monoclonal antibody produced by hybridoma cell line ATCC Accession No. HB8462 and (2) covalently bound thereto a cytotoxin; under conditions with permit lysis.
15. A monoclonal antibody which strongly binds to small cell carcinoma cells compared to the binding of said monoclonal antibody to human neuroblastoma cells, human squamus cell carcinoma cells, and human large-cell undifferentiated lung carcinoma cells, in an indirect immunofluorescence assay in which said cells are incubated with said monoclonal antibody and a fluorescein-labeled second antibody capable of binding to said monoclonal antibody, said antibody recognizing an approximately 50,000 dalton antigenic determinant on the surface of small cell carcinoma cells